



Dart Aerospace Ltd.
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K6A 1K7
Canada

Tel (613) 632-5200

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D407-667-205TRN
Job Sheet 179308



Part No: D407-667-205TRN

Job Qty: 1 ea

Part Name: Crosstube Turning Detail



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 6/16/18

Job Tracking No:

Due Date: 6/29/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG REV G IPP Rev:A 08-03-06 new issue DD verified by:ec IPP Rev B 08.04.02 Removed polish EC verified by: DD IPP Rev:C 08-08-19 revE as per dwg DD verified by:EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	6/29/18	6/29/18	0.00	0.00	Start Up Crosstubes-2		M.D.
100	Mori Seiki	1 pcs	6/29/18	6/29/18	2.49	3.20	Mori Seiki TL-40		M.D.
110	QC	1 pcs	6/29/18	6/29/18	0.00	0.00	QC2-2		M.D.
120	Mori Seiki	1 pcs	6/29/18	6/29/18	0.00	2.50	Mori Seiki TL-40		M.D.
130	QC	1 pcs	6/29/18	6/29/18	0.00	0.00	QC2-2		M.D.
140	QC	1 pcs	6/29/18	6/29/18	0.00	0.00	QC8		GP 18-08-13
145	Crosstubes	1 pcs	6/29/18	6/29/18	0.00	0.65	Crosstubes-2		GP
150	HandFXtube	1 pcs	6/29/18	6/29/18	0.00	0.25	Crosstubes-3		GP 18-08-14
160	QC	1 pcs	6/29/18	6/29/18	0.00	0.00	QC7-3		GP
170	Packaging	1 pcs	6/29/18	6/29/18	0.00	0.00	Packaging3-2		GP
180	QC21-SA	1 Ea	6/29/18	6/29/18	0.00	0.00	QC21		21 AUG 14 2018

Part Op 100 - 1-Fill tube with sand & install plugs DT8531 on both ends as per Folio FA248 3-Turn first side as per Folio FA248
Descriptions: 120 - 1-Turn second side as per Folio FA248 4-Scribe part # and batch # using vibrating stylus as per Dwg D407-667-245
145 - Grind off circumferential machining marks longitudinally.
150 - 1- handfinish X-TUBE INSIDE AND OUT 2- ACID ETCH X-TUBE INSIDE AND OUT. USE RED SCOTCH BRITE
170 - Identify and stock in kanban rack

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6011-115	Crosstube Material	1 Ea (1 ea)	90-Start up Operation	

B123976

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D6011-115	1	74	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Skid-tube ☐</td> <td style="width: 15%;">Cross tube ☐</td> <td style="width: 15%;">Water Jet ☐</td> <td style="width: 15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
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Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																		
Large Fab ☐	Composite ☐	Supplier ☐																			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																	
Description Work Order Deviation			Disposition																		
			Completed By																		
			Lead hand / Supervisor Approval Verification																		
			QC / QA Coordinator Approval																		

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Container No: S091127

Part: D407 - 667 - 205TRN

Job No: 179308

Serial No/Batch: S091127

Revision: G
Inspector:
Exp Date:
Instructions:

FAULT CATEGORY

☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center	☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence
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① 179308

DART AEROSPACE LTD	Work Order: 178952
Description: Crosstube Assembly	Part Number: D407-667-245
Inspection Dwg: D407-667-245 Rev: G	Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

	Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	2.490	+0.005/-0.000	2.4925	✓		Vern 08	
	1.832	+0.005/-0.000	1.836	✓		"	
	1.838	+0.005/-0.000	1.843	✓		"	
	1.892	+0.005/-0.000	1.897	✓		"	
	2.052	+0.005/-0.000	2.056	✓		"	
	2.206	+0.005/-0.000	2.211	✓		BLM3"04	
	2.521	+0.005/-0.000	2.525	✓		"	
	2.633	+0.005/-0.000	2.637	✓		"	
	4.10	+/-0.030	4.110	✓		Vern 08	
	4.978	+/-0.030	4.975	✓		Vern 08	
	2.040	+0.000/-0.010	2.039	✓		Vern 08	
	0.125	+/-0.010	.125	✓		"	
	R0.063	+/-0.010	.063	✓		QG	
	R0.500	+/-0.010	.500	✓		QG	
	2.490	+0.005/-0.000	2.4935	✓		Vern 08	
SIDE B	1.832	+0.005/-0.000	1.837	✓		"	
	1.838	+0.005/-0.000	1.843	✓		"	
	1.892	+0.005/-0.000	1.897	✓		"	
	2.052	+0.005/-0.000	2.056	✓		"	
	2.206	+0.005/-0.000	2.211	✓		BLM3"04	
	2.521	+0.005/-0.000	2.526	✓		"	
	2.633	+0.005/-0.000	2.637	✓		"	
	4.10	+/-0.030	4.114	✓		Vern 08	
	4.978	+/-0.030	4.973	✓		Vern 08	
	2.040	+0.000/-0.010	2.038	✓		Vern 08	
	0.125	+/-0.010	.126	✓		"	
	R0.063	+/-0.010	.063	✓		QG	
	R0.500	+/-0.010	.500	✓		QG	
	112.91	+/-0.020	112.906	✓		Tape	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

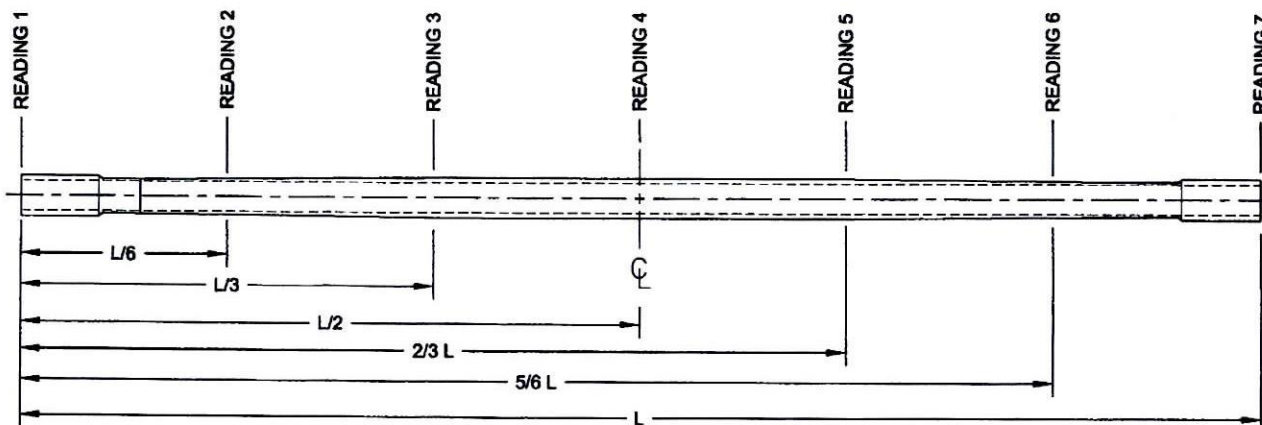
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					

① 178308
198052

DART AEROSPACE LTD	Work Order:
Description: Crosstube Assembly	Part Number: D407-667-245
Inspection Dwg: D407-667-245 Rev: G	Page 2 of 2

WALL THICKNESS MEASUREMENT



Location	WALL THICKNESS MEASUREMENT (IN)				Deviation Δw (max-min)	TOLERANCE
	w1	w2	w3	w4		
READING 1 L= 0"	.213	.215	.215	.213	.002	0.075"
READING 2 L= 18.82	.243	.232	.211	.223	.032	
READING 3 L= 37.64	.410	.383	.369	.385	.041	
READING 4 L= 56.46	.634	.610	.587	.614	.047	
READING 5 L= 75.27	.413	.391	.354	.374	.059	
READING 6 L= 94.09	.261	.235	.195	.219	.066	
READING 7 L= 112.91	.213	.215	.215	.213	.002	

Calibration Result

Actual Block Thickness: 100-700

Sitescan 250 Measured Thickness: 100-700

Measured by: M.D.	Audited by: GP	Preliminary Approval:
Date: 2018-07-11	Date: 18-08-13	Date:

Rev	Date	Change	Revised by	Approved
A	04.04.21	New Issue (P/O D407-667-205)	KJ/RF	
B	06.03.09	Dwg Rev updated	KJ/JLM	
C	06.03.30	Tolerance revised for 4.978 dimension	KJ/JLM	
D	07.02.19	Dwg Rev updated	KJ/JLM	
E	09.05.20	Dwg Rev updated	KJ	
F	12.06.04	Wall thickness form added	KJ	
G	15.05.14	Dwg Rev updated	KJ	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

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Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
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Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					